

REMARKS

In the non-final Office Action, the Examiner rejects claims 1, 3, 16, 27, 28, and 32 under 35 U.S.C. § 102(b) as anticipated by BERNHARDT et al. (U.S. Patent No. 5,710,975); rejects claims 2 and 15 under 35 U.S.C. § 103(a) as unpatentable over BERNHARDT et al. in view of REDI et al. (U.S. Patent Application Publication No. 2002/0071395); and rejects claims 4-13, 17-26, 29-31, and 33 under 35 U.S.C. § 103(a) as unpatentable over BERNHARDT et al. Applicants respectfully traverse these rejections.¹

By way of the present amendment, Applicants amend claims 1-26 and 28-31 to improve form. No new matter has been added by way of the present amendment. Claims 1-33 remain pending.

At the outset, Applicants note that the Examiner does not address independent claim 14 in the Office Action. Applicants assume that the Examiner intends to reject this claim since the Examiner rejects the claims that depend from claim 14. Applicants assume that the Examiner intended to reject claim 14 under 35 U.S.C. § 102(b) as allegedly anticipated by BERNHARDT et al. since the Examiner rejects claim 16, which depends from claim 14, under 35 U.S.C. § 102(b) as allegedly anticipated by BERNHARDT et al. In any event, Applicants respectfully request that the Examiner specifically address the features of claim 14 in the next Communication.

Rejection under 35 U.S.C. § 102(b) based on BERNHARDT et al.

¹ As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

Claims 1, 3, 14, 16, 27, 28, and 32 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by BERNHARDT et al. Applicants respectfully traverse this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. BERNHARDT et al. does not disclose or suggest the combination of features recited in claims 1, 3, 14, 16, 27, 28, and 32.

For example, amended independent claim 1 is directed to a communications network that includes a first node that comprises at least one transceiver and is configured to observe one or more conditions in at least one of the communications network or the first node, select a sleep mode of a plurality of sleep modes based on the observed one or more conditions, each sleep mode of the plurality of sleep modes being associated with a different procedure, and power down the at least one transceiver according to the procedure associated with the selected sleep mode; and a plurality of neighboring nodes. BERNHARDT et al. does not disclose or suggest this combination of features.

For example, BERNHARDT et al. does not disclose or suggest a first node configured to select a sleep mode of a plurality of sleep modes based on one or more observed conditions, where each sleep mode of the plurality of sleep modes is associated with a different procedure. The Examiner relies on col. 3, lines 12-17, of BERNHARDT et al. as allegedly disclosing these features (Office Action, p. 2). Applicants respectfully disagree with the Examiner's interpretation of BERNHARDT et al.

At col. 3, lines 12-17, BERNHARDT et al. discloses:

Preferably, the duration of the power saving interval can be selected using the selective call transceiver 20. Further, it is also preferable that the duration of the power saving interval be variable so that the user of the selective call transceiver may select either a short power saving interval or a longer power saving interval.

This section of BERNHARDT et al. discloses that a power saving interval can be selected by the user of a selective call transceiver as either a short power saving interval or a longer power saving interval. This section of BERNHARDT et al. in no way discloses or suggests that the selection of the short power saving interval or the longer power saving interval is based on one or more conditions observed by selective call transceiver 20 (which the Examiner alleges corresponds to the recited first node), as would be required by claim 1 based on the Examiner's interpretation of BERNHARDT et al.

Moreover, this section of BERNHARDT et al. in no way discloses or suggests that the short power saving interval and the longer power saving interval are associated with a different procedure, as recited in claim 1. Instead, BERNHARDT et al. specifically discloses that that the procedures for both the short power saving interval and the longer power saving interval are the same. For example, BERNHARDT et al. discloses that the selective call transceiver registers with system 10 and then sends a signal, which indicates the power saving interval, to system 10 indicating that the selective call transceiver intends to enter a power saving state (col. 4, line 61 to col. 5, line 56). BERNHARDT et al. does not disclose or suggest that that the short power saving interval and the longer power saving interval are associated with a different procedure, as would be required by claim 1 based on the Examiner's interpretation of BERNHARDT et al.

BERNHARDT et al. does not disclose or suggest a first node configured to select a sleep mode of a plurality of sleep modes based on one or more observed conditions, where each sleep

mode of the plurality of sleep modes is associated with a different procedure, as recited in claim 1. If this rejection is maintained, Applicants respectfully request that the Examiner explain how the above section of BERNHARDT et al. can reasonably be construed as disclosing the above features of claim 1.

For at least the foregoing reasons, Applicants submit that claim 1 is not anticipated by BERNHARDT et al.

Claim 3 depends from claim 1. Therefore, this claim is not anticipated by BERNHARDT et al. for at least the reasons given above with respect to claim 1. Moreover, this claim is not anticipated by BERNHARDT et al. for reasons of its own.

For example, claim 3 recites that the plurality of sleep modes includes at least four sleep modes, and that in response to selecting a first sleep mode of the at least four sleep modes, the first node, when powering down, is configured to set a sleep timer to a first period of time, buffer outgoing packets, and power down the at least one transceiver for the first period of time.

BERNHARDT et al. does not disclose or suggest this combination of features.

For example, BERNHARDT et al. does not disclose or suggest that in response to selecting a first sleep mode of the at least four sleep modes, the first node, when powering down, is configured to buffer outgoing packets. The Examiner relies on col. 3, lines 10-11, of BERNHARDT et al. for allegedly disclosing this feature (Office Action, p. 3). Applicants respectfully disagree with the Examiner's interpretation of BERNHARDT et al.

At col. 3, lines 10-11, BERNHARDT et al. discloses that system 10 sends any stored messages to selective call transceiver. With respect to claim 1, the Examiner relies on BERNHARDT et al.'s selective call transceiver as allegedly corresponding to the recited first node

(Office Action, p. 2). With this interpretation in mind, this section of BERNHARDT et al. does not disclose or suggest that in response to selecting a first sleep mode of the at least four sleep modes, the selective call transceiver, when powering down, is configured to buffer outgoing packets, as would be required by claim 3 based on the Examiner's interpretation of BERNHARDT et al. In fact, this section of BERNHARDT et al. is directed to a totally different device (system 10) storing messages.

For at least these additional reasons, Applicants respectfully submit that claim 3 is not anticipated by BERNHARDT et al.

Independent claims 14, 27, and 32 recite features similar to (yet possibly of different scope than) features described above with respect to claim 1. Therefore, Applicants submit that claims 14, 27, and 32 are not anticipated by BERNHARDT et al. for at least reasons similar to reasons given above with respect to claim 1.

Claim 16 depends from claim 14. Therefore, this claim is not anticipated by BERNHARDT et al. for at least the reasons given above with respect to claim 14. Moreover, this claim is not anticipated by BERNHARDT et al. for reasons of its own.

For example, claim 16 recites features similar to features described above with respect to claim 3. Therefore, Applicants submit that claim 16 is not anticipated by BERNHARDT et al. for at least reasons similar to reasons given above with respect to claim 3.

Claim 28 depends from claim 27. Therefore, this claim is not anticipated by BERNHARDT et al. for at least the reasons given above with respect to claim 28. Moreover, this claim is not anticipated by BERNHARDT et al. for reasons of its own.

For example, claim 28 recites features similar to features described above with respect to claim 3. Therefore, Applicants submit that claim 28 is not anticipated by BERNHARDT et al. for at least reasons similar to reasons given above with respect to claim 3.

Rejection under 35 U.S.C. § 103(a) based on BERNHARDT et al. and REDI et al.

Claims 2 and 15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BERNHARDT et al. in view of REDI et al. Applicants respectfully traverse this rejection.

Claim 2 depends from claim 1. The disclosure of REDI et al. does not remedy the deficiencies in the disclosure of BERNHARDT et al. set forth above with respect to claim 1. Therefore, Applicants submit that claim 2 is patentable over BERNHARDT et al. and REDI et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1.

Claim 15 depends from claim 14. The disclosure of REDI et al. does not remedy the deficiencies in the disclosure of BERNHARDT et al. set forth above with respect to claim 14. Therefore, Applicants submit that claim 15 is patentable over BERNHARDT et al. and REDI et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 14.

Rejection under 35 U.S.C. § 103(a) based on BERNHARDT et al.

Claims 4-13, 17-26, 29-31, and 33 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BERNHARDT et al. Applicants respectfully traverse this rejection.

Claims 4-13 depend from claim 1. Therefore, these claims are patentable over BERNHARDT et al. for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed or suggested by BERNHARDT et al.

For example, claim 4 recites that in response to selecting a second sleep mode of the at least four sleep modes, the first node, when powering down, is configured to transmit a link-level broadcast to the at least one neighboring node, set the sleep timer to a second period of time, the second period of time being longer than the first period of time, buffer outgoing packets, and power down the at least one transceiver for the second period of time. BERNHARDT et al. does not disclose or suggest this combination of features.

For example, BERNHARDT et al. does not disclose or suggest that in response to selecting a second sleep mode of the at least four sleep modes, the first node, when powering down, is configured to buffer outgoing packets. The Examiner relies on col. 3, lines 10-11, of BERNHARDT et al. for allegedly disclosing this feature (Office Action, p. 7). Applicants respectfully disagree with the Examiner's interpretation of BERNHARDT et al.

At col. 3, lines 10-11, BERNHARDT et al. discloses that system 10 sends any stored messages to selective call transceiver. With respect to claim 1, the Examiner relies on BERNHARDT et al.'s selective call transceiver as allegedly corresponding to the recited first node (Office Action, p. 2). With this interpretation in mind, this section of BERNHARDT et al. does not disclose or suggest that in response to selecting a second sleep mode of the at least four sleep modes, the selective call transceiver, when powering down, is configured to buffer outgoing packets, as would be required by claim 4 based on the Examiner's interpretation of BERNHARDT et al. In fact, this section of BERNHARDT et al. is directed to a totally different device (i.e., system 10) that stores messages.

For at least these additional reasons, Applicants submit that claim 4 is patentable over BERNHARDT et al.

Claims 17-26 depend from claim 14. Therefore, these claims are patentable over BERNHARDT et al. for at least the reasons given above with respect to claim 14. Moreover, these claims recite additional features not disclosed or suggested by BERNHARDT et al.

For example, claim 17 recites features similar to features described above with respect to claim 4. Therefore, Applicants submit that claim 17 is patentable over BERNHARDT et al. for at least reasons similar to reasons given above with respect to claim 4.

Claims 29-31 depend from claim 27. Therefore, these claims are patentable over BERNHARDT et al. for at least the reasons given above with respect to claim 27. Moreover, these claims recite additional features not disclosed or suggested by BERNHARDT et al.

For example, claim 29 recites features similar to features described above with respect to claim 4. Therefore, Applicants submit that claim 29 is patentable over BERNHARDT et al. for at least reasons similar to reasons given above with respect to claim 4.

Independent claim 33 is directed to a method for conserving power in a communications node that includes at least one transceiver. The method includes selecting a sleep mode from a group that includes at least four sleep modes, a first sleep mode of the group including powering down the at least one transceiver without notifying neighboring nodes, a second sleep mode of the group including powering down the at least one transceiver after transmitting a link-level broadcast to neighboring nodes, a third sleep mode of the group including powering down the at least one transceiver after transmitting a point-to-point message to each neighboring node and receiving a first acknowledgement message from each neighboring node, and a fourth sleep mode of the group including powering down the at least one transceiver after transmitting a routing application message to each neighboring node that causes each neighboring node to remove the

communications node from its routing tables and receiving a second acknowledgement message from each neighboring node; and powering down the at least one transceiver in accordance with the selected sleep mode. BERNHARDT et al. does not disclose or suggest this combination of features.

For example, BERNHARDT et al. does not disclose or suggest a first sleep mode of the group including powering down the at least one transceiver without notifying neighboring nodes. The Examiner relies on col. 6, lines 16-18, of BERNHARDT et al. for allegedly disclosing this feature (Office Action, p. 20). Applicants respectfully disagree with the Examiner's interpretation of BERNHARDT et al.

At col. 6, lines 16-18, BERNHARDT et al. discloses the ability of a user to awake the selective call transceiver from a power saving state to a fully active state. This section of BERNHARDT et al. does not relate to a first sleep mode of the group including powering down the at least one transceiver without notifying neighboring nodes, as recited in claim 33. Instead, this section of BERNHARDT et al. is directed to awaking from a sleep state. Moreover, BERNHARDT et al. specifically discloses that the procedure by which the selective call transceiver enters a power saving state involves the selective call transceiver (see, for example, col. 5, lines 38-44). BERNHARDT et al. does not disclose or suggest a first sleep mode of the group including powering down the at least one transceiver without notifying neighboring nodes, as recited in claim 33.

BERNHARDT et al. does not further disclose or suggest a second sleep mode of the group including powering down the at least one transceiver after transmitting a link-level broadcast to neighboring nodes, as also recited in claim 33. The Examiner relies on col. 4, lines 61-64, of BERNHARDT et al. for allegedly disclosing this feature (Office Action, p. 20). Applicants respectfully disagree with the Examiner's interpretation of BERNHARDT et al.

At col. 4, lines 61-64, BERNHARDT et al. discloses that the selective call transceiver registers with system 10. BERNHARDT et al. does not disclose or suggest that the registration involves a transmission of a link-level broadcast to neighboring nodes. Thus, this section of BERNHARDT et al. cannot disclose or suggest a second sleep mode of the group including powering down the at least one transceiver after transmitting a link-level broadcast to neighboring nodes, as recited in claim 33.

BERNHARDT et al. does not further disclose or suggest a fourth sleep mode of the group including powering down the at least one transceiver after transmitting a routing application message to each neighboring node that causes each neighboring node to remove the communications node from its routing tables and receiving a second acknowledgement message from each neighboring node, as also recited in claim 33. The Examiner relies on col. 4, lines 61-64 and col. 2, lines 60-62, of BERNHARDT et al. for allegedly disclosing transmitting a routing message and sending an acknowledgement signal, respectively (Office Action, p. 21). Applicants submit that the Examiner not addressed the above feature of claim 33.

That is, claim 33 does not merely recite transmitting a routing message and sending an acknowledgement signal. Instead, claim 33 specifically recites, *inter alia*, a fourth sleep mode of the group including powering down the at least one transceiver after transmitting a routing application message to each neighboring node that causes each neighboring node to remove the communications node from its routing tables and receiving a second acknowledgement message from each neighboring node. The Examiner has not addressed this feature. Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 33.

Nevertheless, at col. 4, lines 61-64, BERNHARDT et al. discloses that the selective call transceiver registers with system 10. This section of BERNHARDT et al. does not disclose or suggest a fourth sleep mode of the group including powering down the at least one transceiver after transmitting a routing application message to each neighboring node that causes each neighboring node to remove the communications node from its routing tables and receiving a second acknowledgement message from each neighboring node, as recited in claim 33.

At col. 2, lines 60-62, BERNHARDT et al. discloses that system 10 responds to a signal from the selective call transceiver requesting that the selective call transceiver enter a power saving state by sending an acknowledgement signal. This section of BERNHARDT et al. does not disclose or suggest a fourth sleep mode of the group including powering down the at least one transceiver after transmitting a routing application message to each neighboring node that causes each neighboring node to remove the communications node from its routing tables and receiving a second acknowledgement message from each neighboring node, as recited in claim 33.

For at least the foregoing reasons, Applicants submit that claim 33 is patentable over BERNHARDT et al.

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 18-1945 and please credit any excess fees to such deposit account.

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